

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



551197

(43) International Publication Date  
14 October 2004 (14.10.2004)

PCT

(10) International Publication Number  
**WO 2004/086882 A1**

(51) International Patent Classification<sup>7</sup>: **A23L 1/302**,  
1/303, 1/305, 1/30, 1/275, A23J 1/14, A61K 8/64

(21) International Application Number:  
PCT/EP2004/003110

(22) International Filing Date: 24 March 2004 (24.03.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
03007677.2 3 April 2003 (03.04.2003) EP

(71) Applicant (for all designated States except US): **DSM IP  
ASSETS B.V.** [NL/NL]; Het Overloon 1, NL-6411 TE  
Heerlen (NL).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **FUNDA, Elger**  
[DE/DE]; Murgstrasse 7, 79639 Grenzach-Wyhlen (DE).  
**HUBER, Torsten** [DE/CH]; Schildmatt 1, CH-4312  
Magden (CH).

(74) Agent: **SCHWANDER, Kuno, Josef**; Roche Vitamins  
Ltd., Wurmisweg 576, CH-4303 Kaiseraugst (CH).

(81) Designated States (unless otherwise indicated, for every  
kind of national protection available): AE, AG, AL, AM,  
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,  
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,  
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,  
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,  
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,  
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,  
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,  
ZW.

(84) Designated States (unless otherwise indicated, for every  
kind of regional protection available): ARIPO (BW, GH,  
GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),  
Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), Euro-  
pean (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR,  
GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK,  
TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW,  
ML, MR, NE, SN, TD, TG).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guid-  
ance Notes on Codes and Abbreviations" appearing at the begin-  
ning of each regular issue of the PCT Gazette.

(54) Title: POWDEROUS FORMULATIONS OF FAT-SOLUBLE ACTIVE INGREDIENTS

(57) Abstract: Stable powderous formulations containing a fat-soluble active ingredient, e.g., vitamin A, in a matrix of a native lupin protein composition are disclosed.

WO 2004/086882 A1